AMENDMENTS TO THE DRAWINGS:

The attached sheet of drawings includes changes to Figure 2. This sheet, which includes Figure 2, replaces the original sheet including Figure 2.

Attachment: Replacement Sheet

REMARKS

In the ***non-final*** Office Action of September 30, 2010 the Office noted that claims 1-28 were pending and rejected claims 1-28. In this amendment claims 1 and 15 have been amended, no claims have been canceled, and, thus, in view of the foregoing claims 1-28 remain pending for reconsideration which is requested. No new matter has been added. The Office's rejections and objections are traversed below.

OBJECTION TO THE DRAWINGS

The drawings stand objected to. In particular the Office asserts that drawings do not show every feature of the invention as specified in the claims. The Applicants have amended the drawings. The Applicants submit that no new matter is believed to have been added by the amendment of the claims.

REJECTIONS under 35 U.S.C. § 103

Claims 1-28 stand rejected under 35 U.S.C. § 103(a) as being obvious over Arnold, U.S. Patent No. 6,154,549 in view of Gerzon, U.S. Patent No. 5,757,927. The Applicants respectfully disagree and traverse the rejection with an argument and amendment.

Arnold discusses determining via a computer parameters describing the position (and not the reproduction direction) of sound sources to be perceived (and not of each channel of a

multi-channel audio signal) for a user 20 (see col. 10, lines 35-40; col. 10, lines 48-58; and col. 11, line 21- 27).

In Arnold there's no relation between the characteristics of sound sources in input and determined position parameters.

To emphasize this difference the Applicants have amended claim 1 to recite "determining via a computer parameters ***from a multi-channel audio signal*** describing the reproduction direction of each channel of ***the*** multi-channel audio signal." (Emphasis added) Support for the amendment may be found, for example, in Fig. 2 and ¶ 0073 of the printed publication version of the Specification. The Applicants submit that no new matter is believed to have been added by the amendment of the claims.

Moreover, the Examiner considers that Arnold teaches a method for controlling an acoustic field reproduction unit comprising a plurality of reproduction elements (see fig. 1) comprising: determining via a computer parameters describing the reproduction direction of each channel of a multichannel of a multi-channel audio signal (see fig. 1 (10), (reads on the sound source, the sound source may be a stereophonic or a quadraphonic, a stereophonic or a quadraphonic includes two or more channels) and see col. 1 line 58 through col. 2 line 54).

In col. 1, line 58 through col. 2 line 54, Arnold discusses stereo, quadraphonic and other recording techniques, not within the description of the invention, but only as part of

the background of the invention to show that the sound sources contained in such stereo/quadraphonic recordings are fixed and that such recording and do not provide interactive control (col. 2, lines 25-30, lines 48-50).

Arnold does not describe that the sound sources (10) can be multi-channel (stereophonic, quadraphonic, ...). Arnold does not provide a way to reposition sound sources of a multichannel recording but to create a new mix from the original mono sound sources. Without the original mono sources Arnold is unable to work. On the opposite, the present invention does not need the original mono sound sources and directly works on the multi-channel signal.

The Examiner considers that Gerzon teaches a spatial adaptation matrix using the determined directions of the reproduction elements and the parameters describing the reproduction directions (see figs. 2-9).

The applicant respectfully disagrees since the B-format signals W, X, Y used by Gerzon are not multichannel signals since each signal is not associated with a reproduction direction. In other words, it is not possible to reproduce B-format signals by directly connecting each signal W, X, Y to a loudspeaker. This is why Gerzon teaches a method to correctly reproduce B-format signals on a specific loudspeaker layout.

Additionally, the Office asserts that the spatial adaptation matrix is determined such that controlling the

reproduction elements with the controlling signals reproduces, in a region comprising the given point, the acoustic field that would have been obtained by controlling, with the multi-channel audio signal (see fig. 14 (L,R), ideal reproduction elements which would exactly comply with the reproduction directions of the multichannel audio signal (CL, CR, LF, RF, LB, RB) (see Figs. 1-14 and see col. 25 line 25 through col. 26 line 67).

The Applicants respectfully reminds that Gerzon does not determine parameters describing the reproduction direction of each channel of the multi-channel audio signal (channels Land R) and that Gerzon does not determine a spatial adaptation matrix using the parameters describing the reproduction directions of each channel.

For at least the reason discussed above, Arnold and Gerzon, taken separately or in combination, fail to render obvious the features of claims 1 and 15 and the claims dependent therefrom.

Withdrawal of the rejections is respectfully requested.

SUMMARY

It is submitted that the claims satisfy the requirements of 35 U.S.C. § 103. It is also submitted that claims 1-28 continue to be allowable. It is further submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for

allowance. An early Notice of Allowance is requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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